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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,415	01/29/2003	Koji Hashimoto	220633US2SRDPCT	8466

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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SWITZER, JULIET CAROLINE

ART UNIT	PAPER NUMBER
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1634

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/070,415

Applicant(s)

HASHIMOTO ET AL.

Examiner

Juliet C. Switzer

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006 and 04 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 34-53 is/are pending in the application.
- 4a) Of the above claim(s) 41, 42, 46, 47, 50, 52 and 53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-40, 43-45, 48, 49 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Newly filed claims 46-47 and 52-53 are withdrawn from prosecution as being drawn to a non-elected invention since method claims were previously restricted away from the product claims. Upon a finding of allowability of product claims, rejoinder of the method claims as provided in MPEP 821.04 will be considered.
2. Likewise, commensurate with the previously filed election, SEQ ID NO: 1 is the elected HCV sequence and this sequence has been considered. At this time no claims are indicated allowable. Claims 41, 42, and 50 are withdrawn from prosecution because they require non-elected sequences. If claims become allowable based on the sequence of probes to MxA, rejoinder of additional HCV probes will be considered (see Examiner's interview summary, mailed 7/10/06).

### ***Claim Rejections - 35 USC § 112***

3. Claims 34-40, 43-45, 48, 49, and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are all indefinite over the recitation "comprising the bases between 415-425" in claim 43 and claim 48 because it is not clear if this recitation is meant to only require that the probe on the substrate comprise nucleotides 416-424 (the bases between but not including 415 and 425) or if this language is meant to require that the probe on the substrate comprise nucleotides 415-425 in their entirety. Clarification is requested.

Art Unit: 1634

Claims 44 and 45 are indefinite over the language “comprises SEQ ID NO: 37 or 38 and is not longer than 30 bases” and the language “comprises SEQ ID NO: 39 or 40 and is not longer than 30 bases” because this language is inconsistent. Likewise, claim 51 is indefinite because it requires that the second probe is selected from the group consisting of SEQ ID NO: 37 and SEQ ID NO: 38, while independent claim 48 requires that the second probe does not exceed 30 bases in length. Instant SEQ ID NO: 37-40 are each 581 nucleotides in length; a probe cannot both comprise a 581 nucleotide sequence and be not longer than 30 bases in length.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maertens et al. (US 5846704) in view of Hijikata et al. (Intervirology 2000, as cited in IDS).

Art Unit: 1634

Regarding claim 34, Maertens et al. teach a probe-immobilized substrate comprising membrane having attached thereupon a first probe immobilized on the substrate that is for detection of HCV. Namely, Maertens et al. teach a membrane having thereupon selected probes which are specific of HCV types (Col. 25, line 62-Col. 26, line 12; Table 4). Further, Maertens et al. teach that response to interferon therapy is predicted by HCV genotype (Col. 2, lines 17-21; Col. 25, line 62-Col. 26, line 12

Maertens et al. does not teach a substrate having a second probe immobilized thereupon wherein the second probe is for the MxA promoter, more specifically wherein the second probe comprises the bases between nucleotides 415-425 of any one of SEQ ID NO: 37, 38, 39, or 40.

Hijikata et al. (2000, as cited in the IDS) teach a correlation between a polymorphism in the MxA gene promoter and patient response to HCV therapy, namely to interferon therapy. Hijikata et al. teach amplification of an oligonucleotide that comprises nucleotides -569 to nucleotide 30 of the human MxA gene. This region comprises nucleotides 415-425 of instant SEQ ID NO: 40 which has a "C" at position 420. The nucleic acid amplified by Hijikata et al. also has a "C" at this position in the human MxA gene promoter (as evidenced in GenBank accession X55639, referenced by Hijikata et al. p. 125). Thus, it would have been prima facie obvious at the time the invention was made to have included probes for detecting and genotyping the human MxA gene promoter on the substrate taught by Maertens et al. for the benefit of providing a single substrate that would be useful for genotyping both a patient's viral genotype and their MxA genotype for use in prediction of response to interferon therapy. An obvious example of such a probe would have been a nucleic acid comprising the amplification product

Art Unit: 1634

obtained by Hijikata et al., which inherently would have comprised nucleotides 415-425 of SEQ ID NO: 40.

Maertens et al. in view of Hijikata et al. do not specifically teach the inclusion of a sequence comprising instant SEQ ID NO: 1 on their substrates. Maertens et al. do teach a "Universal" oligonucleotide which comprises instant SEQ ID NO: 1, namely their SEQ ID NO: 1 (see Table 4, for example). Further, they teach the inclusion of other "universal" oligonucleotides on their substrates, see, for example, the list of oligonucleotides in Table 5. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention taught by Maertens et al. so as to have included their universal oligonucleotide on the substrate. One would have been motivated to include this probe for the purpose of providing an additional universal probe for the detection of HCV in a sample. Thus, in light of the teachings of Maertens et al. in view of Hijikata et al., the claimed invention is prima facie obvious.

Regarding claim 35, the substrates having probes thereupon are considered chips:

Regarding claim 36, the membrane taught by Maertens et al. is a porous material.

Regarding claim 37, SEQ ID NO: 1 taught by Maertens et al. is 27 nucleotides in length.

Regarding claim 38, Maertens et al. in view of Hijikata et al. do not teach a substrate which comprises a probe which CONSISTS of instant SEQ ID NO: 1. However, at the time the invention was made it would have been prima facie obvious to have modified SEQ ID NO: 1 taught Maertens et al. so have to lengthened or shortened the probe by additional nucleotides in order to provide alternative probes for use in the methods taught by Maertens et al. Absent an

Art Unit: 1634

unexpected result, these probes would all have been considered functional homologues of one another with regard to their ability to universally detect HCV sequences.

Regarding claims 39-40, the membrane taught by Maertens et al. in view of Hijikata et al. comprises instant SEQ ID NO: 1 in a first probe that is 27 nucleotides in length.

7. Claims 34-40, 43, 48, 49, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maertens et al. (US 5846704) in view of either Hijikata et al. (Intervirology 2001, as cited in IDS).

Regarding claims 34 and 48, Maertens et al. teach a probe-immobilized substrate comprising membrane having attached thereupon a first probe immobilized on the substrate that is for detection of HCV. Namely, Maertens et al. teach a membrane having thereupon selected probes which are specific of HCV types (Col. 25, line 62-Col. 26, line 12; Table 4). Further, Maertens et al. teach that response to interferon therapy is predicted by HCV genotype (Col. 2, lines 17-21; Col. 25, line 62-Col. 26, line 12

Maertens et al. does not teach a substrate having a second probe immobilized thereupon wherein the second probe is for the MxA promoter, more specifically wherein the second probe comprises the bases between nucleotides 415-425 of any one of SEQ ID NO: 37, 38, 39, or 40.

Hijikata et al. (2000, as cited in the IDS) teach a correlation between a polymorphism at the -123 position of the MxA gene promoter and patient response to HCV therapy, namely to interferon therapy. Further, regarding the second probe of claims 34 and 48, this probe can be selected from one of four different choices given in the claims. Probes instant SEQ ID NO: 39 and 40, for example, contain portions of the MxA gene promoter that overlap with the polymorphism taught at position -123 by Hijikata et al. and have an A and a C, respectively, at

Art Unit: 1634

that position (see nucleotide 420 of instant SEQ ID NO: 39 and 40). Thus, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have included allele specific probes which comprise the polymorphic position at -123 of the MxA gene for the purpose of detecting this genetic polymorphism. Thus, it would have been prima facie obvious at the time the invention was made to have included probes for detecting and genotyping the human MxA gene promoter on the substrate taught by Maertens et al. for the benefit of providing a single substrate that would be useful for genotyping both a patient's viral genotype and their MxA genotype for use in prediction of response to interferon therapy.

Maertens et al. does not specifically teach the inclusion of a sequence comprising instant SEQ ID NO: 1 on their substrates. Maertens et al. do teach a "Universal" oligonucleotide which comprises instant SEQ ID NO: 1, namely their SEQ ID NO: 1 (see Table 4, for example). Further, they teach the inclusion of other "universal" oligonucleotides on their substrates, see, for example, the list of oligonucleotides in Table 5. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention taught by Maertens et al. so as to have included their universal oligonucleotide on the substrate. One would have been motivated to include this probe for the purpose of providing an additional universal probe for the detection of HCV in a sample.

Regarding claims 43, 48, and 51, Hijikata et al. do not exemplify probes that are less than 30 nucleotides in length, and do not teach nucleotides "T" or "G" at this position (as set forth in instant SEQ ID NO: 37 and 38). However, at the time the invention was made, it was routinely practiced to produce such probes of relative short length (less than 30 nucleotides) that overlap with a polymorphic position and include all possible nucleotides at that position in order to



Art Unit: 1634

screen samples for the presence of any possible nucleotide at a position that is known to be a polymorphic position.

Regarding claims 35 and 49, the substrates having probes thereupon are considered chips.

Regarding claim 36, the membrane taught by Maertens et al. is a porous material.

Regarding claim 37, SEQ ID NO: 1 taught by Maertens et al. is 27 nucleotides in length.

Regarding claim 38, Maertens et al. in view of Hijikata et al. do not teach a substrate which comprises a probe which CONSISTS of instant SEQ ID NO: 1. However, at the time the invention was made it would have been prima facie obvious to have modified SEQ ID NO: 1 taught Maertens et al. so have to lengthened or shortened the probe by additional nucleotides in order to provide alternative probes for use in the methods taught by Maertens et al. Absent an unexpected result, these probes would all have been considered functional homologues of one another with regard to their ability to universally detect HCV sequences.

Regarding claims 39-40, the membrane taught by Maertens et al. in view of Hijikata et al. comprises instant SEQ ID NO: 1 in a first probe that is 27 nucleotides in length.

Thus, in view of the prior art, the claimed invention is prima facie obvious.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Art Unit: 1634

*Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 34-40 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6783935 in view of Maertens et al.

The issued patent claims in US 6783935 teach an oligonucleotide comprising nucleotides 415-425 of instant SEQ ID NO: 39 and 40, as instant SEQ ID NO: 1 of that patent comprises these nucleotides at the same position, wherein the nucleotide at position 420 is an "M," and the "M" symbol means a "C" or and "A" is present at that position. The claims of the patent further teach that this molecule is "suitable for predicting the efficacy of interferon therapy." Further, this sequence is the MxA gene promoter.

The patent does not claim this nucleotide on a substrate alone, or in combination with another nucleic acid that is for detecting the presence of a specific nucleic acid of a pathogenic microorganism.

Maertens et al. teach a probe-immobilized substrate comprising membrane having attached thereupon a first probe immobilized for detecting the presence of a specific nucleic acid, and a second probe immobilized on the substrate and having a different base sequence from the first probe, for detecting the presence of a specific nucleic acid of an individual wherein said nucleic acid of said individual is associated with responsiveness to a treatment for a disease.

Art Unit: 1634

Namely, Maertens et al. teach a membrane having thereupon selected probes which are specific of HCV types (Col. 25, line 62-Col. 26, line 12; Table 4). Any one of these probes falls within the scope of the “first probe” required by claim 18. Further, Maertens et al. teach that response to interferon therapy is predicted by HCV genotype (Col. 2, lines 17-21; Col. 25, line 62-Col. 26, line 12). The substrate is a membrane, which is a porous material.

It would have been prima facie obvious at the time the invention was made to have included the claimed nucleic acid sequence on the solid support taught by Maertens et al. One would have been motivated to include this sequence on the support taught by Maertens et al. in order to have provided a tool to genotype an additional nucleic acid sequence that is useful for predicting response to interferon therapy. Maertens et al. does not specifically teach the inclusion of a sequence comprising instant SEQ ID NO: 1 on their substrates. Maertens et al. do teach a “Universal” oligonucleotide which comprises instant SEQ ID NO: 1, namely their SEQ ID NO: 1 (see Table 4, for example). Further, they teach the inclusion of other “universal” oligonucleotides on their substrates, see, for example, the list of oligonucleotides in Table 5. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention taught by Maertens et al. so as to have included their universal oligonucleotide on the substrate. One would have been motivated to include this probe for the purpose of providing an additional universal probe for the detection of HCV in a sample.

10. Claims 34-40 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 and 25-28 of copending Application No. 10/633659 in view of Maertens et al. This is a provisional obviousness-type double patenting rejection.

Art Unit: 1634

The claims of the application set include a polynucleotide immobilized on a surface which is a sequence that is associated with responsiveness to interferon treatment. Namely, the claims teach an oligonucleotide comprising nucleotides 415-425 of instant SEQ ID NO: 39 and 40, as instant SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, and SEQ ID NO: 4 of that application comprise these nucleotides at the same position, wherein the nucleotide at position 420 is an "M," and the "M" symbol means a "C" or and "A" is present at that position. The claims of the patent further teach that these supports can be part of "a gene detecting apparatus for detecting validity of interferon therapy (see claim 25, for example)." Further, this sequence is the MxA gene promoter.

The application does not claim this solid support in combination with another nucleic acid that is for detecting the presence of a specific nucleic acid of a pathogenic microorganism. Maertens et al. teach a probe-immobilized substrate comprising membrane having attached thereupon a first probe immobilized for detecting the presence of a specific nucleic acid, and a second probe immobilized on the substrate and having a different base sequence from the first probe, for detecting the presence of a specific nucleic acid of an individual wherein said nucleic acid of said individual is associated with responsiveness to a treatment for a disease. Namely, Maertens et al. teach a membrane having thereupon selected probes which are specific of HCV types (Col. 25, line 62-Col. 26, line 12; Table 4). Any one of these probes falls within the scope of the "first probe" required by claim 18. Further, Maertens et al. teach that response to interferon therapy is predicted by HCV genotype (Col. 2, lines 17-21; Col. 25, line 62-Col. 26, line 12). The substrate is a membrane, which is a porous material.

It would have been prima facie obvious at the time the invention was made to have included the claimed nucleic acid sequence on the solid support taught by Maertens et al. One would have been motivated to include this sequence on the support taught by Maertens et al. in order to have provided a tool to genotype an additional nucleic acid sequence that is useful for predicting response to interferon therapy. Maertens et al. does not specifically teach the inclusion of a sequence comprising instant SEQ ID NO: 1 on their substrates. Maertens et al. do teach a "Universal" oligonucleotide which comprises instant SEQ ID NO: 1, namely their SEQ ID NO: 1 (see Table 4, for example). Further, they teach the inclusion of other "universal" oligonucleotides on their substrates, see, for example, the list of oligonucleotides in Table 5. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention taught by Maertens et al. so as to have included their universal oligonucleotide on the substrate. One would have been motivated to include this probe for the purpose of providing an additional universal probe for the detection of HCV in a sample.

#### **Response to Remarks**

Applicant's amendments and remarks have been carefully considered but are not persuasive to place the application in condition for allowance.

Applicant points out on page 11 that the polymorphisms discussed in Hijikata et al. (2000) is at a different position than the one disclosed at position 420 of SEQ ID NO: 37-40. However, the rejection based on this reference is based on the fact that it would have been obvious to have used the amplification product taught by Hijikata et al. as a probe on a blot for detection of MxA and this amplification product would inherently include the required ten nucleotide portion of SEQ ID NO: 40, as discussed in the rejection. Thus, the nucleic acid

Art Unit: 1634

taught by Hijikata et al. does inherently include nucleotides 415-425 of instant SEQ ID NO: 40. Applicant further argues that the prior art does not provide a reasonable expectation of success for the superior synergistic results obtained by simultaneous detection of polynucleotides from a pathogen and a gene polymorphism. However, these alleged results are directed towards an intended use for the claimed products. The products are obvious whether or not one uses them for simultaneous detection of human and HCV nucleic acids. One certainly could have used the obvious products for the detection of one and then the other, for example. The rejection is modified and applied to the newly added claims.

Applicant points out that Hijikata et al. (2001) do not disclose the sequences in nucleotides 415-425 of instant SEQ ID NO: 37 and 38. First, nearly all of the pending claims recite these two sequences as alternatives but not as required elements. The claims which recite these portions of SEQ ID NO: 37 and 38 as required elements are first presented in this amended set of claims, and the obvious nature of these sequences is discussed in the rejection in this office action.

The arguments against the double patenting rejections are similar to those for the 103 rejections, and are thus not persuasive. The rejections are modified and maintained in this office action.

### ***Conclusion***

11. No claim is allowed.
12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliet C Switzer whose telephone number is (571) 272-0753. The examiner can normally be reached on Monday, Tuesday, or Thursday, from 9:00 AM until 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached by calling (571) 272-0735.

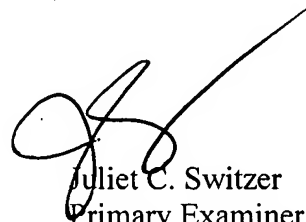
The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-0507.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is

Art Unit: 1634

(866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



Juliet C. Switzer  
Primary Examiner  
Art Unit 1634

December 21, 2006